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British Airways Assessment

Candidate Notes

747 Simulator 2023

747 SIMULATOR

Nothing feels like REAL !

Dear Candidate,

Thank you for booking your British Airways Simulator Assessment Preparation with 747 Simulator.

This document has been produced to help you gain an insight into what to expect during your British Airways Assessment and has been produced using the latest information about the process, our knowledge of the Boeing 747-400 and also input from Pilots who have taken the Assessment.

PLEASE NOTE This document is for information only. I cannot guarantee that British Airways will use the same situations contained in this document for your assessment as they can change or be modified on the day, Nor can I guarantee that use of 747 Simulator will result in a Pass on the day.

I would also request that you do not pass on this document to anyone due to the sensitivity of its contents. It is to be used only as a guide to help you as much as possible to prepare for your assessment.

John Davis

John Davis
(747 Simulator owner)

Did You know ...
Our Simulator is a REAL Boeing 747-400
Flightdeck removed from All Nippon Airways
JA8956 "Ohana Jumbo".
The Software can simulate any Airline
configuration however we generally fly it
as a British Airways Aircraft G-BNLH.

For further info on how the Flightdeck
was restored visit www.747simulator.co.uk

All Nippon Airways Boeing 747-400D JA8956 "Ohana Jumbo"

B747-400 Simulator

Handling Notes for SSP/DEP Candidates

Introduction

The B747-400 is a heavy (Category D), long range aircraft fitted with a sophisticated Flight Management System (FMS), advanced navigation systems and CRT avionics. However for the purpose of this particular exercise, the B747-400 will be operated in its most basic modes. No knowledge of the aircraft systems is assumed or required to complete the detail. The normal MAP display will not be used, instead raw data VOR information will be displayed on the ND (Navigation Display CRT). The FMS will only be used, through the CDU's, to tune radio aids. Autothrottle and Flight Director will not be available for the exercise. Limited autopilot modes are available above Transition Altitude. You will receive a full briefing on aircraft instruments, autopilot operation and the limited use of the FMS, required to complete the exercise, during the pre-exercise briefing.

The following notes on aircraft handling should be read and digested, prior to the exercise. Please note that the procedures here detailed are <u>not</u> the standard operating procedures for the B747-400. They have been developed and written specifically for this exercise.

Take-Off

When cleared for take-off, set thrust to 1.55 EPR. Keep the aircraft on the runway centreline using the rudder pedal steering. At Vr rotate the aircraft to 12½ degrees nose-up at a rate of 2 degrees per second. Once positive climb has been achieved, select Landing Gear – Up. Adjust the pitch attitude to maintain a speed on V2+10kts to V2+25kts (V2 = 143kts); this will require a pitch attitude of approximately 14 degrees nose-up. At Acceleration Altitude (Aa), lower the nose to approximately 8 degrees nose-up, allow the aircraft to accelerate to 250kts and retract the Flaps on schedule. (NB. Flap retraction and extension schedules will be explained in the pre-exercise briefing) Once the flaps are fully retracted, complete the After Take-Off Checklist.

Climb

Climb power is 1.55 EPR and climb speeds are 250kts below 10,000ft and 300kts at 10,000ft and above.

Cruise

Cruise speed below 10,000ft is 250kt; pitch attitude 3½ degrees nose-up, 1.17 EPR approximately. At and above 10,000ft cruise speed is 300kt; pitch attitude 2 degrees nose-up, 1.22 EPR approximately.

Descent

Prior to commencing descent, complete the "Before Descent Checklist". Descent speeds are 300kts at and above 10,000ft; thrust idle, pitch attitude 1 degree nose-down approximately, giving a ROD of 1.900-2,200fpm; 250kts below 10,000ft; thrust idle, pitch attitude 1 degree nose-up approximately, giving a ROD of 1400-1600fpm. Rates of descent can be increased by the use of speedbrake, or reduced by the application of thrust.

Holding

Holding speed is 200kts, Flap 5 degrees, pitch attitude 6½ degrees nose-up, 1.20 EPR approximately.

Intermediate Approach

Intermediate approach (base leg) speed is 180kts, Flap 10 degrees, pitch attitude 7 degrees nose-up, 1.21 EPR approximately.

ILS (Final) Approach

With Glide Slope between 1¼ and 1½ dots fly-up, select Gear Down, Flap 20 degrees and call for "Landing Checklist", do not adjust thrust and allow speed to drift back to 160kts. At Glidepath interception, select Flap 25 degrees, speed 155kts, pitch attitude 3 degrees nose-up, 1.14 EPR approximately.

Go-Around

Call "Go-Around, Flap 20", select power to 1.55 EPR and rotate to 12½ degrees nose-up, when a positive climb is achieved, select Landing Gear Up. Maintain speed 155kts to 175kts to Acceleration Altitude (Aa), then accelerate the aircraft and retract flaps on schedule, as per the after take-off acceleration.

B747-400 Checklist

(DEP/SSP Assessment Only)

Before Take-Off

- ♦ **Flight Controls** ....**Check**
- ♦ **Flaps** ....**20 Green**
- ♦ **Speeds** ....**Set**
- ♦ **Altimeters** ....**QNH & Aa Set**
- ♦ **Trim** ....**Set**

After Take-Off

- ♦ **Landing Gear** ....**Up & Off**
- ♦ **Flaps** ....**Up**
- ♦ **Altimeters** ....**STD set**

Before Descent

- ♦ **Briefing** ....**Complete**
- ♦ **Minima** ....**Set & Crosschecked**
- ♦ **Autobrakes** ....**Set 3**

Approach

- ♦ **Altimeters** ....**QNH Set**

Landing

- ♦ **Speedbrakes** ....**Armed**
- ♦ **Landing Gear** ....**Down**
- ♦ **Flaps** ....**25 Green**

Rough Guide to BA747

Before T/O:- Ensure display and radio aids set for given clearance
　　　　　- checklist complete and speed, hdg and alt set in MCP.

T/O roll: - PF advance t/levers to about 1/3 travel and allow to stabilise
　　　　- PNF sets T/O thrust; PF rests hand on levers until V1.
　　　　- at VR rotate to 14 (requires extra little pull through 10)
　　　　- pos climb, gear up; speed should settle around 160kts.

Init climb: - through Aa (1000'aal), lower nose to 8.
　　　　　- when passing '10' on speed tape, call 'flap 10',
　　　　　- "　　"　　5　"　　"　　"　"　5, etc,
　　　　　- Hold 8 throughout (trimming req'd); roc about 1000'/m ;
　　　　　- when flaps up and 250kts, run through after t/o c/list
　　　　　- anticipate level off:- ATT 4 , THRUST 1.20 (62%)

Cruise: - any time that is spare - use it;- weather, navaids, c/lists, etc
　　　　- be concise with approach briefing (see below)
　　　　- ensure navaids/needles/MDA/displays discussed and set
　　　　- for missed app. brief to remain at F5/200kts if returning hold

Approach: - Descending to altitude -don't forget QNH and App c/list
　　　　　- allow about 10nm to slow from 250 to F5/200 (hold config)
　　　　　call 'flap 1' when slowing from 250kts;
　　　　　maintain speed above 'UP' bug until Flap 1 set. Takes about 10secs.
　　　　　- call 'flap 5' when about 15 kts above '1' bug; this takes
　　　　　about 30secs and requires thrust (1.2ish) to maintain speed
　　　　　above '1' bug until F5 set.
　　　　　- take flap 10 (<5secs) turning inbound in procedure or on
　　　　　 intercept hdg.

Final App:
- ILS 1 1/4dots (diamond touching centre dot) or 2nm before
   descent (non-precn.) call "Gear down/flap 20/speed160/
   Landing c/list". ease thrust to about 1.20(60%).
- hold height using VSI and allow speed to decrease
- approaching G/S (or ½nm) call 'flaps 25, speed 155' and
   (push) attitude to 2½; thrust to 1.14(57%) and TRIM.
- run through c/list when PF settled on ILS/profile.
- good idea to quickly rebrief G/A procedure and set alt

G/A: - Don't go below MDA unless visual before reaching
          - firm call of 'Go around, flaps20'; thrust/attitude 12½
          - +ve climb 'gear up' and you are now in the identical config
             as for T/O; ie attitude 14 speed about 160kt.
          - use radio alt (1000) for Aa
          - when level (or en-route) call for After T/O c/list (even if
             Remaining at F5)

Landing: - smooth control inputs, don't dive!
           - at 50'R look down runway and flare at 30', then power off.

CALLS

Event	PF	PNF
T/O roll	Set Thrust	
		Thrust set
	Check	
		80 kts
	Check	
		V1, Rotate
		Positive climb
	Gear up	
Aa, accelerating	flap 10 Flap 5 Flap 1 Flap up, set speed 250, After T/O c/list.	speed checked,flap 10 etc
Approach	Flap 1 Flap 5, speed 200 Flap 10, speed 180	flap 1 flap5 (dial speed 200) flap 10 (" " 180)

<div align="center">(either)   LOC; G/S alive</div>

1¼ dots	Gear down,flap 20, speed 160, Landing c/list.	(select)
G/S intercept	Flap 25, speed 155	(select)
Fully Established		ready for c/list? (arm speedbrake)
G/A	Go around, flap 20	
		Positive climb
	Gear up	
Aa (1000'R)	- as per T/O -	

GENERALLY: Either one can make 'helpful' calls such as:-
- !000' to go
__ miles to descent/climb/turn
__ degrees to intercept etc
100 above (MDA)
Localiser/G/S alive
but don't lead or pre-empt!!

General.

- ATTITUDE - POWER - TRIM -

- Anticipate pitch/power couple; smooth power adjustments.
- engines take a few seconds to spool up
- keep power setting in your scan at all times
- smooth control inputs allow you to feel the changes, it's big!
- allow trim to 'bite'; don't overtrim
- speed-trend vector and VSI are very useful predicting the future!
- don't get slow - back of drag curve - use thrust to retrieve
- know the ballpark att/power for each config - they work

Briefings.   Keep them concise.

 Before T/O:-   run through SID and set up first principal VOR course
on PF's HSI.
Have a clear picture as to what is pointing; look ahead
For close-in turns maintain F5/200kts until on course

 Approach:-   Weather (ATIS), QNH, Terrain (SSA)
STAR – SLP, IAF and hold
Approach -   horizontal and vertical
 - set up aids (ILS, NDB, etc)
 - MDA
 - Go Around – how and where (maintain F5?)
 - Fuel?/diversion?

As much as flying skills, this is a crew co-operation exercise.
Be interactive, help each other out, agree on what the plan is and be prepared for
changes. If you need some time, create it. Slow down sooner rather than later.
Plan ahead.

	EPR	Speed	Pitch	Set-up
Take-Off (when cleared t/o)				
	1.55	Vr	12.5º NU (2º per second)	+ve RoC, Gear Up
		V2 (143) +10kts to V2 +25kts	14º NU	
		(153kts - 168kts)		
Acceleration Altitude				
	1.55	250kts	8º NU	Retract flaps on schedule
				Flaps fully up then after t/o
				cx
Climb				
	1.55	<10,000ft 250kts	8º NU	
		>10,000ft 300kts		
Cruise				
	1.17	<10,000ft 250kts	3.5º NU	
	1.22	>10,000ft 300kts	2º NU	
Descent (before descent cx prior to descent)				
	Idle	>10,000ft 300kts	1º ND	>RoD with speedbrake
		(1900-2200 fpm)		<RoD with thrust
		<10,000ft 250kts	1º NU	
		(1400-1600 fpm)		
Hold				
	1.2	200kts	6.5º NU	Flap 5º
Intermediate Approach (Base leg)				
	1.21	180kts	7º NU	Flaps 10º
ILS (Final Approach)				
	1.21	Don't touch thrust.		Glideslope 1¼ to 1½ fly up
		Speed to drift back to 160kts		1. Gear Down
				2. Flap 20º
				3. "Landing Checklist"
	1.14	155kts	3º NU	Glideslope interception
				1. Flap 25º
Go Around to Acceleration Altitude				
	1.55	155-175kts to Accel. Alt	12.5º NU	Call "go around flap 20º"
				+ve RoC, Gear Up
	1.55	250kts	8º NU	At acceleration altitude, retract
				flaps on schedule as per after
				t/o acceleration

POWER SETTINGS

In my opinion mastering the pitch and power settings is the key to flying the aircraft smoothly and freeing up mental capacity for the rest of the exercise … DO NOT underestimate its importance !
The Boeing 747-400 is Pitch Power Coupled.
When adjusting Power you can also use the Trend Vector Arrow on the Speed tape and the VSI as a good guide to future trends. The Speed Arrow shows what the speed will be in 10 seconds.

POWER SETTINGS

Configuration / Speed	Attitude	EPR (BA)
CLEAN 250 kts	4^0	1.17
CLEAN 300 kts	2^0	1.22
HOLD F5/200 kts	$6\frac{1}{2}^0$	1.20
BASE F10/180 kts	7^0	1.21
FINAL F25/155 kts	3^0	1.14
T/O & G/A F20 160 kts	14^0	1.55
CLIMB 250 kts	11^0	1.55

747-400 UPPER EICAS
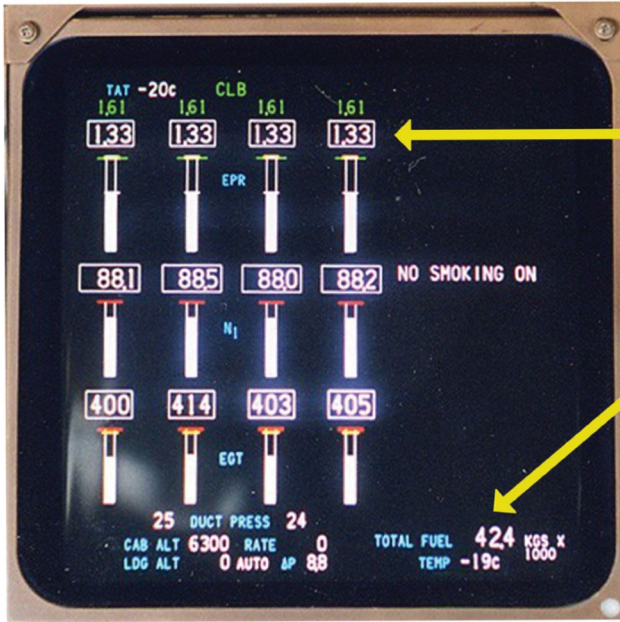
EPR SETTINGS

TOTAL FUEL

The 747 400 Burns approx 10 Tonnes Per Hour

PRIMARY FLIGHT DISPLAY (PFD)
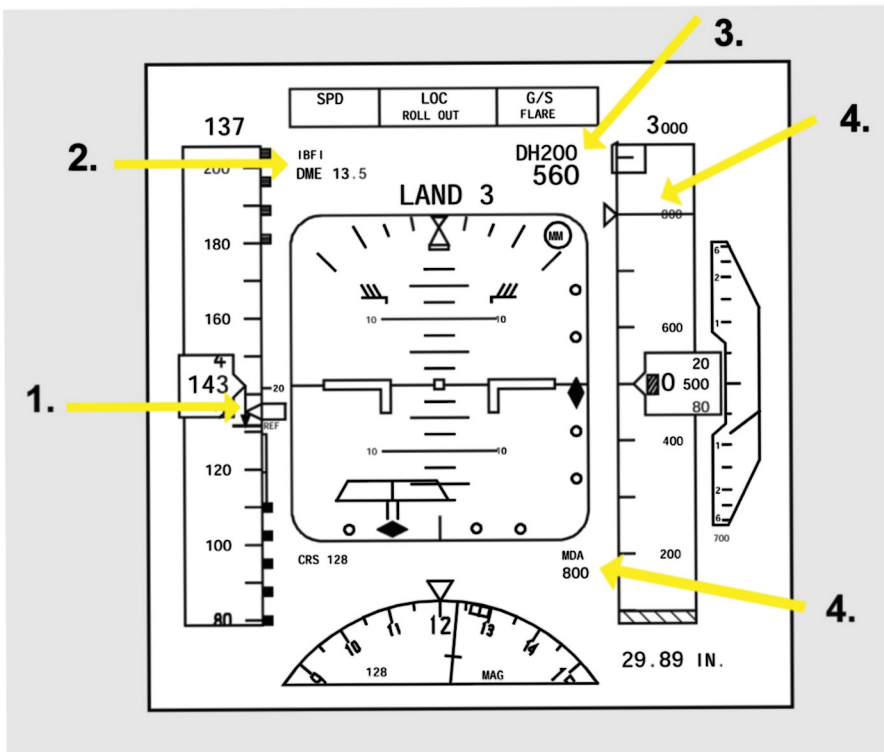
The 747-400 Primary Flight Display is very similar to most Boeing or Airbus aircraft so I have highlighted the main sections you need to know as the rest is fairly standard.

1. Speed Trend Vector Arrow …. This is 10 seconds long so can give a vital clue to speed trend when using manual thrust.

2. ILS Indication ….. This is where the ILS Ident and DME (if applicable) is shown when tuned in the NAV Radios Page. Lettering is in white on black background.

3. Decision height is shown here when set using the EFIS Box (see next page) lettering is Green on a Black background.

4. MDA when set using the EFIS Box (see next page) The altitude is shown at the bottom of the display Green lettering on a Black background and also as a line on the altitude tape. BA requires you to set MDA to Acceleration Height Aa. 1,000 ft AAL and it is in the Before Takeoff Checklist.

EFIS SELECTION BOX
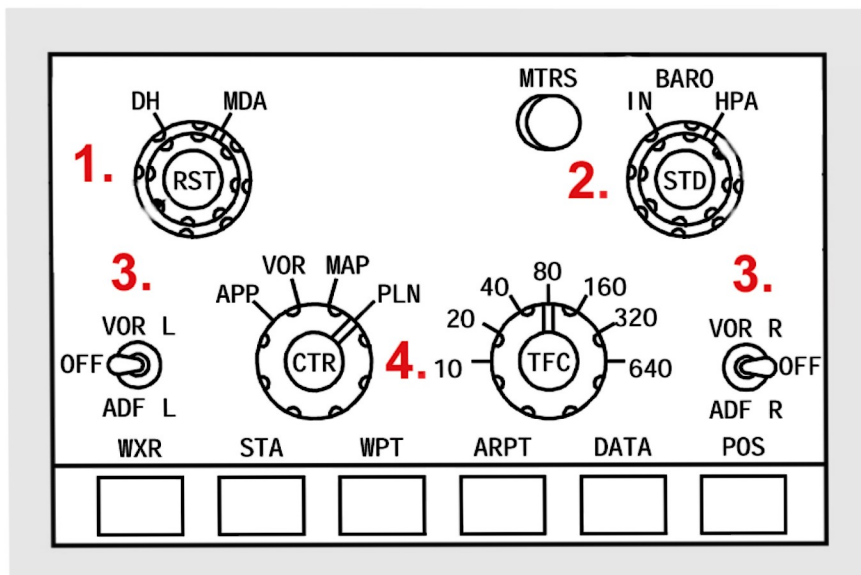
The EFIS Selection box is used for setting DH and MDA   Setting BARO STD and QNH selecting VOR or ADF left and Right and also VOR and APPROACH modes which are the only 2 selections you are allowed for the assessment.

1. DH / MDA Selector (Outer ring switches between them) Inner ring increases or decreases the value, (see PFD Illustration No's 3 and 4 to see where values are displayed on the PFD

2. BARO Knob Outer knob switches between Inches and Hpa for the assessment it will be set to hpa as flights are in the UK Inner ring selects the QNH value and pushing the button switches between QNH and STD (The Setting is shown at the Base of the Speed tape) **Please note** when in STD setting you can change to an arrival QNH by simply turning the selector, the QNH figure will show in small white figures under STD at the base of the Speed tape but will only be applied when you change back to QNH by pushing the STD Button.

3. Selectors for Left and Right VOR and ADF the switches have three positions VOR OFF and ADF   (off is very useful during complex departures or arrivals as several VOR's and NDB's can be tuned and use the switches to flick between them or turn them off without having to de-tune or remove from the NAV RADIOS page (See NAV RAD Page section)

4. VOR and APPROACH Mode selector   For the BA Assessment you are only allowed these two … Sorry !! ….. Pushing the CTR Button changes between Full Compass and Expanded modes … again for the Exercise you are NOT allowed expanded mode so that you can chase the needles making for much better situational awareness. For difference between VOR and APP Modes on the NAV Display see the following page.

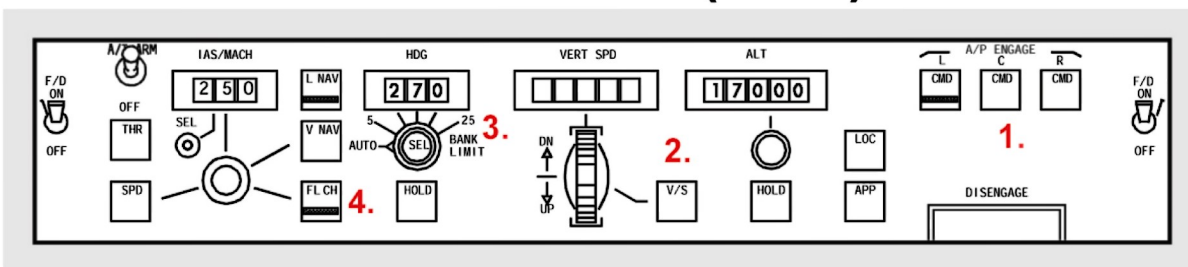# VOR MODE (as seen on the NAV Display)

Selected Course Pointer

Course Deviation Indication and Scale

Windspeed and Direction

Course Deviation Indication and Scale

GS315 TAS312
350/15

VOR R/ELN
CRS 055
DME 13.5

HDG 090 MAG

Right VOR or ADF Needle (FAT) VOR (Green)   ADF (Blue)

TO/FROM Indication

Left VOR or ADF Needle (THIN) VOR (Green)   ADF (Blue)

TO

Track Line

APP MODE (as seen on the NAV Display)

Windspeed and Direction

Selected Course Pointer

Localizer Deviation Indication and Scale

GS152 TAS160
080°/12

ILS L IATL
CRS 055
DME 13.5

HDG 090 MAG

Glideslope Indicator

Airplane Symbol

Track Line

Please note VOR and ADF indicators will also display in APP Mode

AUTOPILOT (MCP)

During the Assessment you are allowed use of the Autopilot in basic modes above Transition Level ….. DON'T FORGET TO USE IT !!!! You would be surprised how many Pilots I have had in my Simulator happily fly it for long periods after transition level before I mention it, remember to make your life easier to allow more time for planning and decision making.

Another good tip … if you are expecting a hold; ask ATC for higher a level to stay above TL to ease your workload … they may just say yes !

1. Autopilot buttons … there are three on the 747-400 you can use any of them.

2. If allowed climbs and descents in Vertical Speed push the VS Button and the Vertical Speed Window will open then use the wheel to adjust the rate.

3. Heading Selector and Bank Limiter …. Check that the Bank Limiter (Outer Ring) is set on 25 and **NOT AUTO** otherwise the aircraft may not turn quickly enough in holds made using the autopilot.   To select a heading turn inner ring
    747 GOTCHA … DO NOT PUSH THE HOLD BUTTON below the selector as this does exactly what it says on the tin and holds the Current Heading … this catches most 737 Pilots out …. Instead Push the SEL button on the selector this will put it the aircraft into Heading select mode, once pushed you can just turn the knob to select a new heading without having to push it again.   HDG SEL will be annunciated in the centre top section of PFD in Green Lettering.

4. If allowed climbs in Flight Level Change (FLCH) just push the button

WHEN CLIMBING & DESCENDING REMEMBER YOU ARE IN CHARGE OF THE THRUST !

Again you would be surprised how many Pilots sit there and ask me what's wrong with the Simulator as it won't climb or descend ?   ….. Increase or decrease thrust.

SETTING NAVIGATIONAL AIDS
(NAV RAD Page)

```
                    NAV RADIO
           VOR L                      VOR R
1.  1L    115.4Ø  A  SY   81Km  116.8Ø    1R
          CRS          RADIAL         CRS
2.  2L                                ---   2R
           ADF L                      ADF R
3.  3L    266.ØBFO                    266.Ø  3R
          ILS-MLS
4.  4L    11Ø.1Ø/336  A                     4R

5.  5L                                      5R
                    PRESELECT
6.  6L    -------              -------       6R
```

The Selection of Navaids in the 747-400 is all done using a single page in the FMC …
The NAV RAD Page, this is the only page of the FMC you will have access to and is really quite simple, as usual it has line select keys for left and right and switching between VOR/ADF left and right on the NAV Display is done by using the switch on the EFIS Box as described earlier.

1. **Line select 1** allows setting of LEFT and RIGHT VOR   (Green Needles on the NAV Display, Thin Needle is the Left VOR Fat Needle is the Right, see diagram on VOR Display)   Entries can be either the Frequency or the Identifier i.e. for Talla VOR (TLA) either enter TLA or its frequency of 113.80   **TIP … If you enter the Identifier (TLA) the system will automatically Ident it for you** …. This saves you incorrectly entering a frequency and the VOR not displaying.   The Current Selected VOR is displayed in the bottom Left or Right hand corner of the NAV Display as long as it is switched on using the EFIS Box.

2. **Line Select 2** (Left or Right) allows you to enter a course to track the VOR   **TIP … to save entering the Frequency or Identifier separately you can also enter it all in Line select 1 instead … using TLA as an example again enter either TLA/027 or 113.80/027 into Line select 1 (Left or Right) and it will automatically fill in both for you.**   If you want to use the CDI Indicator on the VOR Display enter it into VOR Left in my simulator as it only displays on the left hand side, I believe this is the same in the real aircraft although I think it is the right side on the FO CDU.

3. **Line Select 3** allows setting of LEFT and RIGHT ADF   (Blue Needles on the NAV Display, Thin Needle is the Left ADF Fat Needle is the Right , see diagram on VOR Display)   Entries **MUST BE THE FREQUENCY** i.e. 266.0
The Current Selected ADF is displayed in the bottom Left or Right hand corner of the NAV Display as long as it is switched on using the EFIS Box.

4. **Line Select 4** allows setting of ILS Frequency   This must be the frequency and make sure it is followed by the course or it won't identify i.e. 110.10/236 The ILS will Identify and show in white lettering in the Top Left hand corner of the PFD See earlier Diagram. **TIP …. If you need the ILS for DME readout on a departure enter it in Line Select 4 rather than VOR Left or Right as it will display in top left hand corner of the PFD with the DME, this will save using a slot for another Navaid on complex departures, the only time I recommend entering it in VOR Left is if you need to use the CDI Indicator to track its course outbound on a departure.**

5. **Line Select 5**   (Not used on the NAV RAD Page)

6. **Line Select 6**   Left and Right Pre-select lines, these can be used to enter Navaids used later in the departure or route and can be entered as discussed before either frequency and course or Identifier and course or just frequency for ADF …. When needed just down select them to the scratch pad and put them back into the appropriate line select and side you wish to use them in.

ROUTES used for the Assessment

Below is a list of 12 routes known to be used by BA for the assessment, you could get any of these and any variation as they may possibly change these.

There is also supposed to be a route from Heathrow to Brussels which is occasionally used however I have no information on it … if you get it on the day please let me know … (it's a bit like the Marie Celeste this one … hear a lot about it but never see it ☺)

All of these routes can be practiced in my Simulator, you may ask for particular ones or I can give them randomly … for best use of Simulator time please note each route lasts one hour from beginning to end. (including set-up of navaids, briefings by crew etc.)

PLEASE DO NOT PASS THESE ROUTES ON TO OTHER PARTIES.

ROUTE	DEP	R/W	SID	ROUTE - SEGMENT	ARRIVAL	DEST	REMARKS
BA1	BHX	15	TNT		DAYNE2A	MAN	PROC ILS 05L OR PROC VOR DME 23R
BA2	EDI	6	TLA	DCT HAVEN (TLA R103/12.0) DCT		NCL	PROC ILS / NDB
BA3	GLA	23	DCS		ROSUN1A/1B	MAN	PROC ILS 05R
		5	NGY	N615 DCS	ROSUN1A/1B		PROC ILS 05R
BA4	LGW	26L	CLN	DCT DET	ABBOT1E	STN	DIV BHX/LHR RV ILS, AIP says CLN SID should be used until DET, then join ABBOT STAR
BA5	LHR	27R	BPK	DCT BKY DCT BUSTA DCT LOREL DCT		STN	DIV BHX/LHR, RV ILS
BA6	MAN	23R	HON		BNN4A	LHR	DIV LGW
		05L	LISTO	DCT HON	BNN4A		DIV LGW
		05L	LISTO	P18 STAFA L10 HON	BNN4A		DIV LGW
BA7	NCL	07		DCT TILNI DCT GASKO POL	ROKUP1F	EMA	NDB ILS 27 NDB ILS 09
		25		DCT TILNI DCT GASKO Y99 CROFT	ROKUP1B		NDB ILS 27 NDB ILS 09
BA8	NCL	07		DCT TILNI DCT POL	CHASE2G	BHX	ILS 15
		25		DCT TILNI DCT GASKO Y99 CROFT	CHASE3B		ILS 15
BA9	NCL	25		DCT TILNI P18 GASKO DCT SETEL	ROSUN1C	MAN	RV ILS 23R OR PROC ILS 23R
BA10	STN	22	BUZAD	T420 TNT	DAYNE2A	MAN	DIV EMA
BA11	STN	22	BUZAD		GROVE1C	BHX	DIV MAN, RV ILS
BA12	PIK	13 / 31	TRN	TUNSO	TWEED 1B	EDI	ILS 06

GENERAL HINTS AND TIPS

GENERAL ATITUDE

The Whole BA assessment is about Working together CRM and Decision Making … they are not looking for you to be an expert in flying the 747-400 the assessment is not Type Specific and no Aircraft Failures will be given , any diverts will be Medical Emergencies or Smoke in the Cabin. **REMEMBER IT IS NOT A COMPETITION TO SHOW WHO FLYS BEST !**
BA assumes you can fly an aircraft or you wouldn't be applying would you ? Working with your Sim Partner to Fly or Managing the flight to the best of both of your abilities will result in you both passing or at least you being shown in a good light. Help one another to make the Grade.

Take a clipboard, pen and paper … it maybe your saviour !
Be yourself and try and enjoy it, arrive early and have a coffee, ask questions.
BA will give you a good briefing on the instrumentation and what to expect from the exercise and will also be friendly and try to put you at ease, during the briefing, look keen and ask questions.
Be Professional. The emphasis is on flying the sector as you would in normal operations.

You should then be given a Practice TO and climb to 3,000 ft followed by a reposition to ILS and opportunity for questions.

The First route will then be flown, followed by a coffee break and 10 mins preparation and then change seats.

FLIGHT PREPARATION

You and your Sim Partner will be given 10 minutes of Preparation time on your own prior to each flight. They will also give you Charts PLOG weather and NOTAMs to use.
During the assessment don't be afraid to ask for different flight levels to those issued if it helps you … they can always say No !   Use rule of thumb, check distances and add two zeros to the track miles for the flight level i.e. 180nm =18,000ft **ALL CHARTS ARE AERADS, IF YOU ARE NOT FAMILIAR WITH THEM, BEG, BORROW OR STEAL A COUPLE AS THEY CAN THROW YOU A BIT.**

The 747-400 is a BIG Aircraft ….. Be careful intercepting Radials as she can sail straight through them due to the momentum, think ahead of the aircraft !

The PNF is the only one allowed an Airways Chart so try to make a sketch of the route if you are PF. If given Level restrictions make notes of them on paper …. No Paper ?   use the scratchpad of the FMC if it's available.
Expanded Map, Autothrottle and Flight Director use is **NOT Allowed**, Limited Autopilot is allowed above Transition level …. USE IT !!! It's your BEST FRIEND !!!!

BA only allows you to handover control for a very short period of time.
Check Charts VERY carefully for GOTCHA's from what I have seen and heard the departures are not only complex but have many altitude constraints on them, expect ATC to clear you below MSA or Platform altitudes and also to change departures due to traffic and assign you altitudes below those marked on the charts. The same applies with distances marked on charts, some of the routes used have many turns based on radials and distances, some are so short as to be practically invisible on the chart , this can really screw up where you expect to turn if you don't

notice it.   Be ready to trap errors by good briefing techniques, also some of the routes are based on a SID or direct intercept of an Airway … be sure to check what Navaids the Airway is being defined by. Some airways have Waypoints with nothing to define them. i.e NATEB at Newcastle. (I believe this is over the Old Newcastle (NEW) VOR)

The 747 is a very BIG aircraft … I strongly advise not cleaning the aircraft up too early if you have Turns on the departure, stay at Flap 5 and 200kts until you are clear of these.
Most of these departures have one or more turns right at the time you would be retracting flaps.

As far as I'm aware BA will give you a laminated chart of Landing Minima so the ones on the Aerad Charts are not used.

The upper winds used during the assessments are likely to be just strong enough to require attention to drift.

Expect Questions and also to be asked to give ETA's and Position reports, these will happen more frequently in the cruise if everything is going quiet, so keep talking and keep busy !!!

DO NOT CARRY OUT UN-NECESSARY TASKS at critical times particularly when PNF such as identifying or setting non essential Navaids approaching a turn **Aviate, Navigate, Communicate**
Expect ATC to be at the most inconvenient times particularly level offs, check what the aircraft is doing, ask them to standby and answer when you have time.

BRIEFINGS (All Flight Phases)

Make these INTERACTIVE and OPEN they are looking for the way you share your thinking, you will be given a slot as soon as you have obtained clearance so you will need to brief Quickly Clearly and Accurately. i.e.
What do you make the stop Altitude ?
What is the highest MSA ?
What is the biggest thing to catch us out on this departure ?
How many track miles do we need ?
I'm going to fly at Flap X at XXX speed , I will remain at Flap X until …
Anything else we should be thinking about ?

For the Openness ask things like …
Is there anything I've forgotten?
Can you think of anything I've missed ?
If you see anything you don't like please speak up as I'm possibly going to make mistakes today.

Basically all good CRM techniques that keep both Pilots and the instructor in the Loop !
KEEP TALKING TO ONE ANOTHER … It's less time for Questions ☺

Again, be ready to trap errors by good briefing techniques !

TIP … IF NOT READY FOR DEPARTURE i.e. you are not sure of the SID or what you will be doing after take of then **DON'T TAKE OFF !!!** ATC may try to push you into departing but remember BA are looking for **SAFETY** …. Treat like the real world and ask for more time.

If the sector is short, consider briefing everything on the ground and suggest you brief any differences in the air.

Remember the PNF has the most important task as he/she has more time and capacity enabling a good amount of support; however you will need to ask for that support as under no circumstances he/she is not allowed to lead you. Use the PNF as much as possible and when in that capacity be as helpful as you can.

TAKEOFF

BEFORE TAKEOFF CHECKLIST PLEASE !!!   … <u>DO NOT FORGET THE CHECKLISTS !!!!</u>

TIP …. There should be some white lines on the Power Strips on the Upper EICAS this should indicate the 1.55 setting as long as that figure is the same as the green figures at the top of each power strip if green figures DO NOT Show 1.55 then advance the power until the white line sits at the base of the Blue word EPR (in centre of display) … that gives approx 1.55

NOTE PF Stands the Throttles Up and call SET Thrust and the PNF sets 1.55 EPR This should be set **BEFORE 80kts**

No forward pressure is required on the Yoke unlike a 737 … this isn't a Ferrari ☺

CLEAN UP

As mentioned before if turns are expected stay at Flap 5 and 200 kts until clear.
The 747-400 has leading edge devices and therefore it takes a long time to raise or deploy the flaps between 5 and Up ….. The Flap indication is an oblong bar on the UPPER EICAS Screen When the flaps are initially moved the line and figure i.e. (10) will be Magenta, when set, the figure will and line will change to Green.
After Acceleration altitude use the figures on the PFD Speed Tape to determine when to raise the flaps i.e. 10 5 1 and UP (They appear after each one is set , i.e. as soon as you set Flap 10 a 5 will then appear on the speed tape. Retract them as the speed tape passes them, **BE AWARE AT THIS LIGHT WEIGHT YOU WILL FIND THAT YOU ARE PRACTICALLY ON TOP OF THE NEXT SPEED AS YOU CALL THE LAST ONE … IT HAPPENS VERY FAST ! So be aware if you are PF**

If you are PNF when you have time **do not** forget to put the Landing Gear lever into the OFF position as it's called for in the After Takeoff Checklist.

CLIMB

REMEMBER   at Transition Level get the Autopilot in straight away as it will free you up to do other things …. However also expect them to keep you below Transition Level for as long as they can …. Don't be afraid to ask for a higher level … they are looking for you to use your initiative, in fact ask ATC for whatever you want all the way through …. After all they can always say NO ! **REMEMBER TO REPORT ALTITUDE BUSTS TO ATC AS YOU WOULD DO IN REAL LIFE !**

WHEN CLEAN AND YOU HAVE TIME ….. **AFTER CHECKLIST PLEASE !!!!**

LEVEL OFF'S

The 747 is a Big Beast and as it is Pitch Power coupled it can be hard to Level out in the climb particularly, a good tip is at 1,000 TO GO reduce the Power to an EPR of 1.40 and lower the nose to 6 degrees then you will only have a few degrees and a small reduction in thrust back to 1.17 (250kts) or 1.22 (300kts) to level out smoothly. … **ATTITUDE, POWER, TRIM**

CRUISE

Use the Autopilot if you are above Transition Level (if you have not already got it in) this will free up capacity for both of you.   You have use of FLCH, HDG ETC …. **REMEMBER THRUST IS YOURS !   Also as mentioned before DO NOT Push the HOLD Button** as it just holds the present heading, push the SEL Button this will place aircraft in Heading Select, from then on change the heading with the rotary knob.
If you are not happy with your altitude or speed DO SOMETHING ABOUT IT !
Do the after take off checklist if you have not already had time.
Review the current situation, make sure everything is going to plan and then start work on obtaining weather, setting up arrival Navaids (if possible) and briefing …. Remember if you sit there you are wasting time and giving them an opportunity to ask you questions !
Don't let ATC overload you … ask them to standby until you have the capacity … Think Safety.

Give Clear and concise briefing …. Are you Happy ? … Have I missed Anything ? Talk about Fuel, Possible Holdings, Diversions ETC, This is how I'm going to fly the approach, I'm going to configure here, here and here etc.
Set Autobrakes to 3
If Holding or Diverting the Total Fuel can be found on the UPPER EICAS at the base of the screen (see illustration on Power Settings page) … the 747-400 burns roughly 10 Tonnes per Hour

BEFORE DESCENT CHECKLIST PLEASE !

EMERGENCIES

The PNF is the only one allowed an Airways Chart

If given Emergencies or Diverts be sure to use TDODAR and NITS , PAN / MADAY if required, once decisions are made most importantly REVIEW THEM !

Don't be afraid to slow or hold if you need time to prepare or get weather, it's about good decision making and the safety of ALL onboard

The most likely Emergencies will be

MEDICAL EMERGENCIES
Is it Real or Hoax ? ask cabin Manager to see if there is a Medical Professional onboard
Use TDODAR
Call to ATC would be PANPAN PANPAN PANPAN Speedbird XXX Medical emergency
Always Prioritise the Safety of Aircraft and other Passengers … "The Needs of the Many outweigh the Needs of the Few Captain" … as Spock once said ☺

BOMB THREAT / SECURITY ALERT
Use TDODAR
PAN PAN ?

CABIN FIRE
Use TDODAR
If Fire not contained you need to be on the ground in 15 MINUTES !
If contained you have more time
ASK for Vectors , keep situational awareness as they may clear you to a runway which takes too long or conversely does not give you enough track miles to slow down and configure … Think Safety of Aircraft and Passengers … it's a Catch 22 Situation here !
MAYDAY CALL

NITSS BRIEFING
(Use when dealing with emergencies such as Smoke in the Cabin / Medical Emergencies etc.)

N - Nature of the problem.
I - Intentions of the FD crew.
T - Time available (before landing/to secure the cabin/etc.)
S - Signals (i.e. will we use anything other than conventional signals to the crew?)
S - Special circumstances (e.g. if we're not going to be able to vacate the runway)
    Possibility of an evacuation after landing,
    Emergency or normal landing (brace call?)
    Fire truck/paramedic attendance
    different approach attitude (will seem a bit unusual

TDODAR BRIEFING
(Use when dealing with Aircraft emergencies such as Engine Fires Failures etc.)
after Abnormal Checklist has been used.

T – Time (available)
D - Diagnosis - What's gone wrong?
O - Options to resolve the problem
D - Decide the most appropriate course of action
A - Assign and Act to resolve the problem. Use airborne crew and ground units if
    they are able   to assist.
**R**- Review - Did it work and if not change to an alternative course of action.

DESCENT

IF NOT LREADY COMPLETED CALL FOR DESCENT CHECKLIST
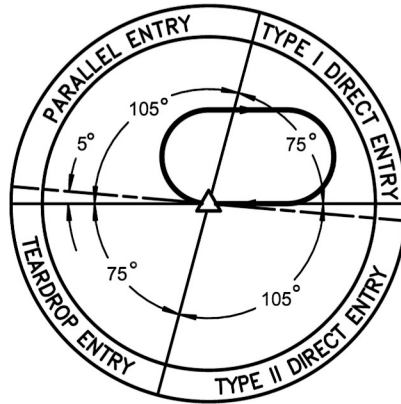
TIP …. TRY TO STAY ABOVE TRANSITION LEVEL SO THAT YOU CAN USE THE AUTOPILOT ESPECIALLY FOR HOLDS

HOLDING AND INITIAL APPROACH

If you are asked to Hold confirm the Direction with PNF, ask if Happy and Resolve any doubt. Holding is not something that is done everyday … I have had Pilots use my Simulator who have not performed a Hold since their IR !!! Indecision about holds is something I see all the time in my Simulator and I hear of it happening time and time again on the Assessments even with people going round the wrong way … It is very easy to get confused under pressure so if you are in any doubt about holds then READ UP ON IT … to help here is a brief review.
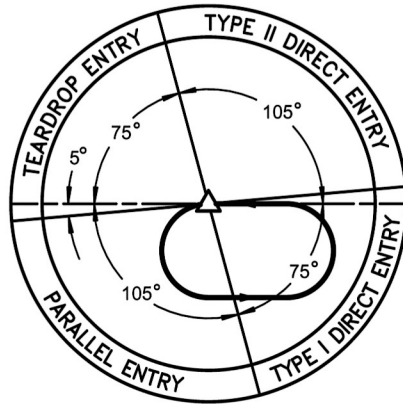
LEFT TURN HOLD ENTRY REGIONS   **RIGHT TURN HOLD ENTRY REGIONS**
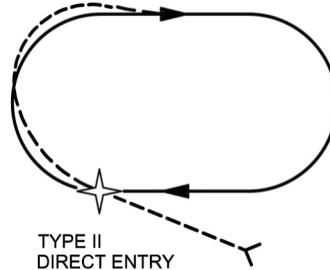
RIGHT TURN HOLD ENTRY CURVES
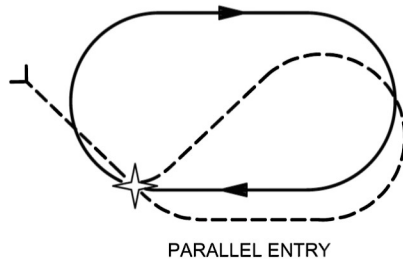
PARALLEL ENTRY
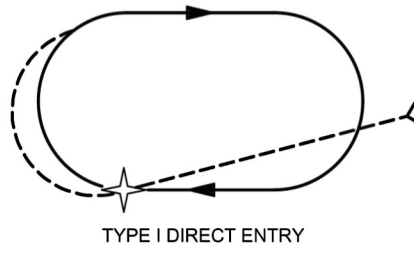
TYPE I DIRECT ENTRY
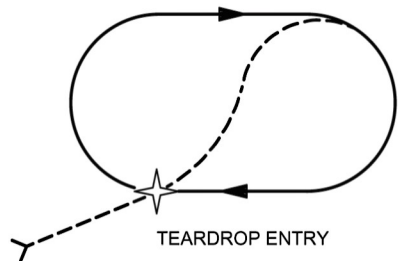
TEARDROP ENTRY

TYPE II
DIRECT ENTRY

Remember to check for drift and wind speed for timing and make it clear when you want the legs timing from i.e. wings level. Also consider Fuel Reserves in the Hold (Seen on Upper EICAS Screen at Base)

HOLDING IN THE BA 747-400 IS FLAPS 5 AND 200 KTS

FINAL APPROACH

APPROACH CHECKLIST   PLEASE !!

Expect them to cut you in early, keep you high etc… ask for more track miles if you need it, if its going well expect a sudden strong tailwind !

Initial Approach (Base Leg) should be Flap 10 and Speed 180kts

Review Missed Approach if Necessary and Set Missed Approach Altitude.

Use the ILS indications on the ND for approach, although there are ILS indicators on the PFD using these diamonds will result in you snaking down the ILS without the use of a Flight Director.

When Glideslope is 1 ¼ 1 ½ Dots or 2NM if non precision – **GEAR DOWN -FLAPS 20 - SPEED 160 kts SET INBOUND QDM**

On Glideslope intercept Set Flaps 25 allow the speed to trickle back to 155 kts be careful of power here, if it's too high you will be snaking all the way down the ILS chasing the speed, aim for a rate of Descent of 800 ft per minute and adjust Power accordingly …. It should be a setting of 1.15 EPR, if set correctly and ROD is 800ft per min the speed should stay within a few knots … if it isn't Check the VSI !   USE PNF to call out all height checks particularly on NPA, Fly Gently … are you Stable ?

WHEN ABLE, LANDING CHECKLIST PLEASE !!

IF NOT STABLE ... GO AROUND !!!!!!   … there are no prizes for landing, they want to see a good decision here.

CALL … GO AROUND FLAPS 20 Pitch up to 12 ½ degrees   Positive rate Gear UP
At Acceleration Altitude pitch to 8 degrees and accelerate, think about staying at Flap 5 180 kts if returning, once level, review, get weather talk to ATC Passengers etc.

LANDING

Although the landing is not assessed it's always nice to make a good one …. Remember the 747 is a BIG Aircraft, many of you are used to seeing a nice wide runway and being lower down as regards the viewpoint although mentioned elsewhere in this document the following is a good way to complete a nice landing. BA Instructors often guide you through the landing once passed DA as a way of seeing how well you take instructions

If landing DO NOT Over Control , if High don't just stuff the nose down just accept it to a point or go-around Listen to the Altitude call outs, you will hear them at 1,000   500   50, 30, 20 and 10 ft
If the ILS is flown correctly it will give you a descent rate of approx 800ft per minute on the Glideslope, keep that going until you hear "100" … be ready and when you hear "50" pull the nose up 2 degrees (which is hardly anything) just to bring the aircraft level at that point you should hear "30" smoothly reduce thrust and if all goes well the power levers should hit the backstop as you touchdown.
Reverse Thrust, Review Braking and Bring to a Stop …. If landing after a Smoke in the Cabin consider doing the Evacuation as a "Good Scout" exercise … its listed on the PNF Main instrument panel … although you may not know where everything is on the overhead it might show initiative ☺

As far as I'm aware BA use University of Texas Criteria to score your performance.

Behavioural "Markers" as defined by UT.

First we should look at the University of Texas LOSA rating scale. The markers listed below are used in Line Operations Safety Audits. Each of these markers has been validated as relating to either Threat or Error avoidance or management. With the exception of two global ratings, specific markers are rated during particular phases of flight. Following is a list of currently used markers showing phase where rated.
Key to Phase: P-Pre-departure/taxi; T-Takeoff/Climb; D-Descent/Approach; G-Global

			Phase
SOP BRIEFING	The required briefing was interactive and operationally thorough	- Concise, not rushed, and met SOP requirements - Bottom lines were established	P-D
PLANS STATED	Operational plans and decisions were communicated and acknowledged	- Shared understanding about plans - "Everybody on the same page"	P-D
WORKLOAD ASSIGNMENT	Roles and responsibilities were defined for normal and non-normal situations	- Workload assignments were communicated and acknowledged	P-D
CONTINGENCY MANAGEMENT	Crew members developed effective strategies to manage threats to safety	- Threats and their consequences were anticipated - Used all available resources to manage threats	P-D
MONITOR / CROSSCHECK	Crew members actively monitored and cross-checked systems and other crew members	- Aircraft position, settings, and crew actions were verified	P-T-D
WORKLOAD MANAGEMENT	Operational tasks were prioritized and properly managed to handle primary flight duties	- Avoided task fixation - Did not allow work overload	P-T-D
VIGILANCE	Crew members remained alert of the environment and position of the aircraft	- Crew members maintained situational awareness	P-T-D
AUTOMATION MANAGEMENT	Automation was properly managed to balance situational and/or workload requirements	- Automation setup was briefed to other members - Effective recovery techniques from automation anomalies	P-T-D
EVALUATION OF PLANS	Existing plans were reviewed and modified when necessary	- Crew decisions and actions were openly analyzed to make sure the existing plan was the best plan	P-T
INQUIRY	Crew members asked questions to investigate and/or clarify current plans of action	- Crew members not afraid to express a lack of knowledge - "Nothing taken for granted" attitude	P-T
ASSERTIVENESS	Crew members stated critical information *and/or* solutions with appropriate persistence	- Crew members spoke up without hesitation	P-T
COMMUNICATION ENVIRONMENT	Environment for open communication was established and maintained	- Good cross talk - flow of information was fluid, clear, and direct	G
LEADERSHIP	Captain showed leadership and coordinated flight deck activities	- In command, decisive, and encouraged crew participation	G

Ratings	**FAIL**	**PASS**		
	1 = Poor	2 = Marginal	3 = Good	4 = Outstanding
	Observed performance had safety implications	Observed performance was barely adequate	Observed performance was effective	Observed performance was truly noteworthy

DETAILED ACCOUNTS OF A BRITISH AIRWAYS ASSESSMENT FROM MY CUSTOMERS (All these people now fly for BA)

Briefing etc...no problem and a bit of a chat getting to know your history etc... First 30 mins at least is filling out paperwork for a security clearance if you got selected.

One thing they have in the brief is you cannot hand over control when briefing, setting up etc... only for a few secs if necessary.

The Aerad plates are a bit unusual but if you know the Jepps at least you know what you are going to get. We had a guy called Rob Di Angelo, firm but fair, he is the Senior Examiner on the B747 for BA and so was really really good acting as ATC, Cabin Crew etc. and pushed us all the way.

You get 15 mins prep time before each sim which is plenty enough, a few Notams for each airport but nothing too much to worry about there. I used the rule of thumb, max FL = distance in nm for the flight. Then of course you are kept low on the SID so you can amend this as time goes on.

Person 1.
==========

EDN 06 SID - Talla 6D. Just after the turn passing 3000ft he says stop climb 4000ft. Then due traffic asks you to intercept an inbound radial to TLA, wasn't sure if the 5500 before 13TLA still applied so quiered with ATC. Once established only then cleared to 6000ft. Didn't engage AP as not above Transition.

Then requested cruising level, to be safe we wanted FL 90 but he made us climb to FL110.
Engage AP, asking for a Position report O'Head Talla and ETA Talla.
Mentioned SB On for whole flight as short sector, CC blinged to ask if we wanted anything.

As soon as transferred to Eastern Radar get Wx, runway in use and approach aids in NCL as you won't have time later on. We were told LOC only approach but in 20mins time the ILS would be available - we had the extra fuel but at that time elected to slow down and not commit to the hold, incase things improved. Only PM has the airways charts, from TLA go on to Haven, TLA 103/12 if I remember then that takes to a waypoint NATEB which is overhead NCL but not defined by anything but using the chart we flew direct NT instead of the VOR for that is a DME only readout.

Coming closer CC calls, Medical Emergency, Defib being using on a pax who
has had suspected Cardiac Arrest.   This is approaching NT before TOD I
think but you have to calculate that yourself so know the distance from Tall-Haven-NT nab, ideally on a scrap of paper on your side for Situational Awareness (SA) as you won't have time later on.
Then all good CRM stuff such as ask for a Doctor on board, TDODAR, give yourself time to think by entering the hold, remembering to slow down to hold speed. Use PAN PAN.

Even if ATC have cleared you to 3500ft, stay above TL and tell them that's what you'd like to do, just remember if you have been cleared to an Altitude that you might have QNH already set and need to switch back to STD. Took me 3 attempts as PM to point out to PF that if he does that he can keep the AP in and increase the SA as he can do the hold himself whilst you liaise with ATC, telling them where you are in the Hold, intentions etc, NITS to Cabin Crew, PA telling all pax after landing to keep their seats due to a sick pax who will need emergency medical assistance after landing, Call Company if time allows (we ran out of time for that).

PF made a good call and did the entry, plus one hold, then alternative procedure outbound. Plenty track miles to lose the height from FL 70. Briefs very short and cover the essentials, be a good PM and say things like

1 miles to the turn, "turn", 1000 to go.   Turning finals for the LOC I

asked if the ILS was going to be back online for the approach, good boy scout there but showing an awareness of little things.

Person 2.
=========

NEW 07 Departure Procedure. As with the other one after departure stop Clb 4000ft, fly this heading, intercept radial from X vor before further climb allowed. You are then flying an airway to POL to begin the Rokup 1G to EMA. Similar to the other where PM being asked for an ETA, but a little more time on this sector. Again get the weather etc for EMA when you can - we climbed to FL 150 as little drama initially. Where ATC gets the PM on this sector, is due traffic at point X (I was PF so not sure of exact routing) fly the following alternative airways to get to POL so all of a sudden you are having to work out new radials and inbound courses, and telling the PF when to turn as he will not have a clue and be relying purely on you. My PM got a little confused at one point I could hear him saying erm... so as PF I just asked him for the first radial and course and at what point to turn then he could concentrate on the rest instead of telling me everything in one go.

Approaching 20 MCT, CC call up and talk about Smoke in the Cabin. They want you on the ground within 15 mins from this point so you show them you are aware of how time critical this all is. No luck finding the source, people choking etc. We got weather for MAN, declared Mayday and after a quick discussion using TDODAR elected to divert into MAN. Get PM to get booklet for MAN as you won't have it at that point. I began slowing down in order to take up the hold to give us time to think and set up, so was F5 200kts at FL 130 when ATC being deliberately helpful said all runways available, turn heading 170deg or something like that. Descended at that speed until base turn, but for me gave enough time, other more slick pilots 250kt SB to get down faster. I lost some SA at this point in trying to tell PM to do a NITS brief, PM to make a PA saying after landing to only use the forward exits, telling ATC of our intention to stop on the runway and evacuate so when ATC asked the next few questions I was basing my answer on track miles and how another person from the Virtual Aviation Feedback stuck to taking 23R which did influence my thinking, perhaps a bit too much.

ATC offered me 05L or 23R, I asked how many track miles for 05L as at the time we were left downwind and they said 25nm, we were at FL120 so I thought too high and fast so requested 23R instead of extra track miles which would have been a better option, oh well. ATC even offered me an orbit instead but I declined for some reason, figuring doing an orbit would be harder to hand fly than simple ATC vectors mainly straight and instead did a 180deg to become right Downwind for 23R. Brief consisted of checking ILS frequency and setting minima - that was it. Briefed MA during the approach but realistically we were going to land no matter what. Made my biggest error in being cleared to 3000ft, I had in mind the value of _500 for some reason which is the usual platform at MAN and thus descended to 2500 and began leveling out before the PM realised what I had done. Climbed back to 3000ft before getting any Terrain warning, though call ATC and tell them of your Altitude bust. Rest fairly standard vectors to land.

After landing, don't just stop the A/C but ask for the Evacuation Checklist, I know in theory you aren't assessed below MDA but I'm sure it creates a good impression - at which time the instructor will stop you and that is the end of it. Our feedback/debrief was a informal chat as we were escorted out of the building i.e. not much. As everyone else says just keep the other guy in the loop, help as PM with prompts like 10deg to go, 1nm to the turn, 2nm to the descent point as PF capacity is much reduced.

ANOTHER ACCOUNT FROM ONE OF MY CUSTOMERS

I got EDI to NCL, via Talla and Haven. The NEW VOR still existed in the sim, but the bar did not work, so that you had to track the needle. After all the practice I put in, the flight was reasonably uneventful. I was allowed to use the autopilot above transition (but not the autothrottle). I was given FL 230 and 300kt, asked for FL120 and 250kt, and was allowed to fly FL130 and 280kt as a compromise, which slowed things down a little. I then eased my workload by slowing down for the procedure at Newcastle whilst in the descent above transition, i.e. with the autopilot still in. The slow down reduced my descent rate, so I used the speedbrake to stay ahead of the game. With about 20nm to run, I got direct NT, procedural ILS to land on either RWY 25 or 07. The wind was between the runways and we discussed track miles and opted for 07 which was quicker.

My sim partner got NCL - EMA, off RWY 07, straight ahead, right turn to intercept airway from POL, for a ROKUP 1F arrival at EMA. Approaching VEGAR we then had a call from the cabin crew saying a pax had had a heart attack. We quickly discussed it, then made a PAN call and asked for immediate vectors for EMA. We got a choice of runways again but went for 27, as we needed the track miles. The radar vectors helped us avoid the procedural arrival for EMA which would have been quite involved.

My sim partner was an A320 Pilot and had done very little to prepare himself. So that made it quite difficult at times. I had to help him a lot on his sector, and I was at times concerned that I was doing too much. I didn't want to mention this in the de-brief as I did not want to make him look bad, but I feel that I probably should have done, as it had been noted.
Other than that we managed to fly a reasonable sector. He is still waiting to hear.

So thanks again John, and I will certainly recommend you!!

BA Sim June 2011

It started with standard intro's very pleasant and relaxed, then off to the cafeteria where our trainer very kindly bought us both coffee and biscuits. After a relaxed chat about what we've been flying and the general state of the nation we wandered down to the briefing room.

The briefing was again very relaxed and we had plenty of time for questions and queries. Since I was Boeing rated and my sim buddy was not I offered to go first. We were given the route pack and left for the standard 10 minutes prep. It was a simple EDI – MAN with a DCS departure. Unlike all the info I had received so far from previous feedback the weather was not cat 1 at MAN there was a tempo of 400m fg on the TAF, the METAR was currently below 500m. I made a point of briefing we were legal, 2 suitable alts on the plog with sufficient fuel etc.

Prior to starting we had a practice, climb ahead 3000 for a reposition to 12 mile final on the ILS.

The SID was a little ragged with a 150' overshoot leveling off but otherwise ok. Flew a lot of the SID at F5 Vref 40 to keep turns manageable (briefed at the beginning) A short cut was given at 5000' so I asked the pnf to confirm it was above MSA etc and we then got cruise climb.
In the cruise we had no questions or interruptions from the trainer or ATC. Possibly because we filled the time discussing the weather at MAN and planning contingencies. I noticed (luckily) that there was a freq for ops at the bottom of the plog so asked the pnf to call up and ask where they wanted the A/C in the event of a G/A. (plogged alts were BHX and LTN) pointing out we had fuel for LHR. They said LHR was primary.

With the Weather received (SCT 300' RVR 900m) we continued into Man with a procedural SID and ILS briefed but were given RV from the initial app fix. ILS to minima, no sighting standard missed app. (we had already briefed ATC of our intentions to div to LHR). In the G/A the controller said RVR was now in excess of 1500 Cloud base 300, would we like to try again.
We did some quick maths and realised if we subtracted the fuel burned from the initial app fix to level after the G/A from the current fuel we would not have enough to div to BHX after another G/A. Also it was cloud base that precluded us not RVR since we went visual as we dipped below the cloud base during the G/A.

ATC cleared us on the way to LHR, we worked out a cruise level, got above MSA and the sim ended.

We were given ten minutes break for coffee, and then the second prep session was completed in the Sim for a MAN – LHR leg.

Similar to the previous no big surprises, but on final to 27L the runway was blocked and we were asked if we wanted to s/step to 27R (in IMC) Said no went around.
In the G/A the PF was asked directly about his fuel, for holding times and Div possibilities because he was a little confused about the CMR final RES and Diversion fuels on the plog. After some pointed questioning we managed to establish how long we could hold before diverting to Stansted. Once this figure was established we got priority clearance for RV ILS 27R LHR that went without issue to a landing. No hints were given in the de-brief and we were set free.

It took 2 weeks for my sim partner and myself to find out we were through.

Thank you so much for your help I really appreciate it and I'll be recommending your services to others.

BA Sim Assessment

There has been a lot written about the assessment, this is my take on it. I have flown the 737 and currently fly the A320/A321. Firstly in my humble opinion, this is not so much a flying exercise as a CRM assessment. This is not to say that a minimum level of flying skills must not be demonstrated, but don't get hung up on flying the 747 to Chuck Yeager standards – because unless you are rated on it, you will simply not achieve it – or miss something on the CRM side.

Summary of the day helps to reduce the fear of the unknown. After a good chat with my oppo and the delightful receptionist at Cranebank, – not 'The Rivers' (I think her name was Beanie – and by the way the examiners go and ask her what she thought of you guys), you are met by the examiner. He takes you to one of the 747 briefing rooms. You show licence and logbook at this stage. Then comes the PowerPoint briefing of the aircraft – covering pitch and thrust settings – You must have learnt these – essential. Then he takes you through the PFD/ND stuff – this is where a practice before hand really helps – if I hadn't I'd be getting a little concerned at this stage!. You toss a coin – then you are handed the f/plan, en-route chart, Notams and the arrival charts. All charts are Aerad. I use Aerad, and with a service to Africa was fairly used to looking at the airways charts – if you are not – worthwhile getting hold of a sample – where to find things – remember what the number in the boxes on the airways charts mean etc!!

At the planning stage, just discuss with your oppo, what you think you're going to need set up – i.e. quickly run through the flight together – allow them to offer advice – it is not a competition. Off to the sim.

My route was PIK – EDI. Lots of open-ended questions with the briefing – do this sincerely – you don't know everything and the other chap will be invaluable when you launch. It has been said before but the PNF (PM) essentially talk you through it, "5 miles before the left turn 180 to pick up the X radial, I'll tell when to turn, turn now, needle coming in nicely, looking good" etc. I wont repeat what others have said other than, very short sector to fit in all the checks, briefing, navigating and the niceties – but just get on with it quickly don't wait. Once you are above transition get AP in ask for the weather, get to cruise very quickly and set up and brief quickly – (I briefed on the deck – then picked up salient points – these are, page number and effective date, MSA, inbound radial and frequency and identifier, minima and go around – that's it). Descent checks and get down. On my oppo's sector which was EDI – NCL – this last point was missed despite me pleading with him to start descending – remember 3x altitude + 10 to slow down – use the speed brake!

My oppo – did a good job in the end. We looked after each other and both made some good calls – as you would do in real life. Remain calm; despite inside working like a one-arm paperhanger, keep the CRM thing going as in real life. You will make mistakes, your flying will not be as accurate as you are used to, forget it, this is a CRM exercise. Work together – and you'll be fine. We both got the nod.

John – your sim proved very valuable. It's knowing where to look when things get busy. I regret not spending a little more time playing with the RAD NAV page, as this was the only thing that increased my workload slightly – until I remembered your words on letter ID for the VORs etc. Familiarity with some of the routes that you provide John is helpful but not essential. But having said that EDI – NCL that we did together helped reduce the nerves as we launched for the assessment!

As you said if you can fly your sim, the actual flying in the assessment should be ok! Good luck.

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The only thing left to say is to thank you for using 747 Simulator and I wish you success in your British Airways Assessment.

I look forward to meeting you in my 747 Simulator for your Preparation.

If you have any queries about any of the material contained in this Document please feel free to contact me via my website **www.747simulator.co.uk or Phone 07762 061518**

Best Wishes

John Davis
(747 Simulator owner)